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EDITORIAL.—DR. J. T. ROTHROCK left this country for Germany, June 19, to spend a few months in some of the renowned botanical laboratories there. He is specially interested in the preparation of anatomical studies and we may expect from him slides even superior to those he has already produced.

MR. S. T. FERGUS, of Westchester, Penn., is a young man who is doing some most excellent work in the preparation of slides for the microscope. We have before us a half-dozen of as handsome slides as we have ever seen. He seems to be particularly successful in the bleaching of ferns, and, by means of double staining, the spores are brought out in very sharp outline. For class use or for private study nothing better could be given than a well-selected lot of slides, such as Mr. Fergus prepares. We would cordially recommend him to botanists as one worthy their patronage.

BARON EGGERS has sent out a prospectus in which is promised the scientific exploration of the West Indies. The natural history of these islands is very imperfectly known, and what has been done gives us very scrappy results. Baron Eggers now proposes a thorough exploration of the islands for the purpose of freshening up knowledge already gained, but more for the discovery of the unknown species that he is confident are lurking there. The Baron starts in with the advantage of many years of study in the botany of the West Indies and the organization of exploration under his experienced guidance must bring very great results for very little outlay. The object of the prospectus is to invite the co-operation of botanists by subscribing for sets already made and still to be made. Subscriptions, stating the address, kind and number of collections desired, should be sent to Baron Eggers, St. Thomas, West Indies, by the 1st of July. Payment will be made upon the delivery of the collections. The price per hundred species for Phænogams is \$12 50; for Cryptogams, \$10. If botanists desire, arrangements can be made to send only their *desiderata*.

THE VALLEY NATURALIST comes to the front again, and through a circular letter promises to revive itself, under a somewhat altered form, for \$1.50 per year. It is to be published monthly and will consist of sixteen pages, and appeals to naturalists of every kind for a support. It calls for the "minor notes that every working naturalist daily makes, and however interesting they may be, often remain forever buried in the note-book of the observer." Now, we have been fishing for these same "minor notes" for some years past, and

have come to the conclusion that botanists do not take as many notes as we give them credit for doing, or that such notes as they do "daily" make are not worth publishing in any kind of a paper, and if they are buried they deserve to be. We are only afraid that if Mr. Skaer confides too much in the resurrection of buried notes he will find 16 pages hanging heavy on his hands. Too often does the scientific editor, when the time to go to press comes to hand, find himself compelled to make something out of nothing, and his many subscribers, with their many buried notes, sit quietly down and read the result with no pangs of remorse. Any one sending 15 cents to Mr. Henry Skaer, Room 34, N. W. Cor. 3d and Pine Sts., St. Louis, Mo., can obtain No. 1 of the *Valley Naturalist*, and can judge for himself whether he wishes to continue it.

MR. E. S. MILLER, of Wading River, N. Y., sends out for 1880 an attractive catalogue of North American Orchids, Bulbs, Aquatics, Ferns, etc. The promise is made that any North American plants, not in the catalogue, will be procured if application for them is made in suitable season. The list as given contains 56 Orchids, 76 Ferns, 54 Aquatic plants, 76 Bulbs, 28 Shrubs, and 193 Herbaceous Plants.

DR. OTTO KUNTZE, of Leipzig, has recently published a work in which he seems to take some very advanced views and proposes some very radical changes. He considers that recent investigations, such as those of Darwin, have destroyed the old idea of species, but that we still hold to it in systematic botany. He makes strong objection to the practice of taking some form as the type of a species and thus seeming to acknowledge species as a fixed rather than a relative thing. To follow nature correctly he contends that every form should be described and arranged in proper relationships, and thus the true genealogy might be made out. Dr. Kuntze illustrates his methods by applying them to the simple-leaved forms of the genus *Rubus*, a most perplexing one to Old World botanists. Thus, if we catch the idea, under this genus *Rubus*, we would have no specific names, but simply terms applying to certain classes of forms. Not so very simply, either, as the following proposed names will show. Under simple-leaved *Rubi* are first, *Finiformes* and *Gregiformes*. The latter are again divided into *Locoformes*, *Typiformes*, *Versiformes*, *Rami-formes*, *Aviformes*, *Medioformes*, *Mistoformes*, *Singuliformes*, etc. Rather than use such terms in place of our simple specific names we think that botanists will choose to continue to seem to contradict nature for the sake of convenience. We can still say *Rubus Canadensis* with the mental reservation at the same time that we know there is no such thing, just as we speak of the flow of a current of electricity, although we know that electricity is no fluid. Nor do we see why the proposed change should not be applied to genera as well as to species. Another change Dr. Kuntze proposes is to use arbitrary signs in place of language in botanical descriptions. Imagine the descriptive phrase, "Sepals 2, ovate, free, persistent. Stamens 5, adhering to the short claws of the petals" made to look something like this—"S₂ x o=A₅ x X y P." When a botanical description gets to

look like an equation in affected quadratics it loses much of its attractiveness to the ordinary botanist.

THE EDITORS OF THE GAZETTE propose to take a summer vacation, and to be relieved for a month or two from editorial duties. The August number will, therefore, not be published as usual, during the last week of July, but publication will be deferred to the last week of August, when a double number, of at least 30 pages, will be published for August and September. Any communications sent during the months of July and August should be addressed to the Editors at the Botanic Garden, Cambridge, Mass. We hope that subscribers will take careful note of the above, and not be sending us queries as to what has become of the August GAZETTE.

NOTULÆ EXIGUÆ.—*Eremurus robustus*, that stately Liliaceous plant of Turkestan, which is now displaying its raceme of half a yard in length in the Cambridge Botanic Garden, exhibits strong proterandry correlated with a movement of the style, analogous to that of *Sabbatia*. When the flower opens the slender style becomes at once strongly deflexed; on the second or third day, when the stigma becomes receptive and the anthers effete, the style straightens and brings itself nearly into the line of the axis of the flower.

The collection of Venezuelan Mosses put up into sets of 145 species each, named by Dr. Mueller, with a printed form of ticket, along with a copy of the pamphlet (from Linnæa) in which they are enumerated, and the very many new species described, is now furnished for \$14, by Adolf Schrader, No. 224 West State St., Columbus, Ohio.—A. GRAY.

VITALITY OF SEROTINOUS CONES.—In a seed so large as any one of the Pines referred to, there need be no prolonged experiment to ascertain its vital power. All seeds change the normal color when the germinating power is lost. If a pine seed has an ivory white tint when cut across, it may grow, no matter how many years old it may be. I say may grow, because there are many contingencies on which success is dependent besides the vital conditions of the seeds themselves. Germinating pine seeds are susceptible to fungoid attacks beyond any seeds I know, and they are very often wholly destroyed before the radicle has hardly pushed through the seed coat. In Prof. Sargent's experiments the seed were sown on the 17th of May, and "the final examination was made on the 15th of December." The final examination should have been made within six weeks of sowing, as in *Pinus contorta*, all would have been sprouted in that time that intended to grow, and those with injured radicles would have been distinctly seen.

As the original discoverer of living trees of *Pinus pungens* in Pennsylvania (an old cone having been found by Professor Porter a few months before) I have taken an interest in watching its behavior. The cones would scarcely be called serotinous as a general thing, for I have often found cones of the same season open in October, and all